

REMARKS

Claims 1-9 are all the claims pending in the application. Claims 1-7 are rejected. Claim 1 is amended, and this amendment is clearly supported by the illustration in Fig. 1 and its accompanying description in the specification. Claims 8 and 9 are withdrawn from consideration.

Election/Restriction

The Examiner acknowledges Applicant's election of Group I, claims 1-7, for examination. The Examiner treats the election as being without traverse. Applicant confirms such treatment.

Claim Rejections - 35 U.S.C. § 102

Claims 1 and 3-7 are rejected as being anticipated by Tanahashi et al (6,511,761), Honda (5,851,643) or Hosoe et al (5,723,198). These rejections are traversed for at least the following reasons.

Claim 1 has been amended to expressly state that the protection layer is formed “on a surface” of the soft magnetic layer. This amendment provides three essential characteristics for the invention that define over the prior art:

- First, the amendment specifies a direct formation, as it specifies the activity “on a surface,” and precludes an interpretation of the claim to cover a formation with other layers in between.
- Second, the amendment requires the direct formation to be on a surface of a “soft magnetic layer.” The term “soft magnetic layer” is defined at page 2 of the application as being made of a substance having a soft magnetic property, as distinguished from a material having a hard magnetic property. An example of a soft magnetic layer is given at page 12 for the first example, where a FeTaC composition is involved. As explained at page 16, soft magnetic materials are particularly subject to degradation due to heat and oxygen. The invention provides added protection for the material, thereby enhancing its reliability and performance.

- Third, the claim is directed to a disk substrate for a perpendicular magnetic recording medium. The perpendicular magnetic recording medium is distinguishable from a longitudinal magnetic recording medium and a goal is to have only a single soft magnetic layer with a suitable thickness rather than plural layers, as discussed at page 3 of the application.

It is well settled in the law that "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." MPEP §2131 (8th Edition), Verdegaal Bros. v. Union Oil Co. of Cal., 814 F.2d 628, 631 (Fed. Cir. 1987). Thus, if a stated limitation is missing, the claim cannot be anticipated and a rejection under Section 102 is improper.

The present rejections are overcome for several reasons.

First, with respect to the cited references, each relate to the magnetic recording medium as the product. By contrast, the present invention recited in the above-amended claim 1 relates to the disk substrate for a perpendicular magnetic recording medium as the subject of the invention. Thus, the focus of the invention is different with respect to the prior art.

Second, according to the present invention as recited in amended claim 1 and with reference to the non-limiting embodiments of the specification, the protection layer 14 is formed on the surface of the soft magnetic layer 13, as shown in Fig. 1. In other words, the protection layer is formed directly on the soft magnetic layer.

Finally, the invention requires use of a soft magnetic layer, as clearly distinguished from a hard magnetic layer.

By contrast, in each of the cited references, other layers such as magnetic layers and underlayers are additionally formed between the protection layer (16 in Tanahashi et al; 27 in Honda; 67 in Hosoe et al) and the soft magnetic layer (14 in Tanahashi et al; 25/29 in Honda; 57 in Hosoe et al). Thus, there is no teaching of the protection layer being directly on the soft magnetic layer.

Claim 2 is rejected as being anticipated by Tanahashi et al (6,511,761), Honda (5,851,643) or Hosoe et al (5,723,198). These rejections are traversed for at least the following

reasons.

In framing the rejection, the Examiner states that the cited references “do not recite the nature of the carbon protection layer. Claim 2 states that the layer is amorphous. This limitation is not found in any one of the prior art references, by the Examiner’s own admission. Thus, under the basic principles of U.S. law, the claim cannot be anticipated.

Claim Rejections - 35 U.S.C. § 103

Claims 1 and 3-7 are rejected as being unpatentable over Tanahashi et al (6,511,761), Honda (5,851,643) or Hosoe et al (5,723,198). These rejections are traversed for at least the following reasons.

The Examiner can point to no teaching or suggestion for changing the disclosed structure in each reference to arrive at the direct connection between the protection layer and the magnetic layer, as claimed. Whether taken alone or in various combinations, due to the limited teachings of these references directing one skilled in the art away from the invention, only hindsight would lead to a change in the arrangement of layers disclosed in the references. Thus, Applicants submit that the claims as now drafted would be allowable.

Claim 2 is rejected as being unpatentable over Tanahashi et al (6,511,761), Honda (5,851,643) or Hosoe et al (5,723,198). This rejection is traversed for at least the following reasons.

The Examiner can point to no teaching or suggestion for changing the disclosed structure in each reference to arrive at a disk substrate having a direct connection between a protection layer and a magnetic layer, especially one having an amorphous protection layer, as claimed. Only hindsight would lead to a change in the arrangement of layers disclosed in the references. Thus, Applicants submit that the claims as now drafted would be allowable.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

Amendment Under 37 C.F.R. § 1.111
U.S. Application No. 10/758,035

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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Date: March 22, 2007